

APRIL/MAY 2024

**23UFCS14/23UFSC14 — PROBLEM
SOLVING TECHNIQUES**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. What is compiler?
2. What is Fifth Generation Language?
3. What are the benefits of using algorithms?
4. What are the activities involved in program design?
5. How the relational operators used in programming languages?
6. What is count controlled repetition?
7. Which are called nonnumeric data types?
8. What are the characteristics of numeric data?
9. What are the two types of DFD?
10. What is modular programming?

SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL the questions.

11. (a) Discuss the characteristics of a computer.

Or

- (b) Explain the broad classification of software used in a computer system.

12. (a) Explain the common approaches used For designing algorithms.

Or

- (b) Discuss the flowchart symbols with an example chart.

13. (a) Explain multiple branching switch statement.

Or

- (b) Discuss the features of selection structures in programming languages.

14. (a) Explain the various numeric data types.

Or

- (b) How do you define strings? Explain.

15. (a) How do you define and use subprograms? Explain.

Or

- (b) Explain the basic functions of a sequential files.

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Briefly explain the basic organization of a computer system.

17. Discuss the different steps in program development.

18. Explain the counter controlled looping structures.

19. Explain the array types with examples.

20. Explain the basic elements used for constructing DFD with all example.